

A REVISION OF THE FUR MITES MYOBIIDAE (ACARINA) (suite)

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RADFORDIA EWINGI (FOX, 1937).

Myobia ewingi Fox, 1937, *Proc. ent. Soc. Wash.*, **39** : 227.

Radfordia ewingi (Fox, 1937); Ewing (1938), *Proc. ent. Soc. Wash.*, **40** : 7, 190.

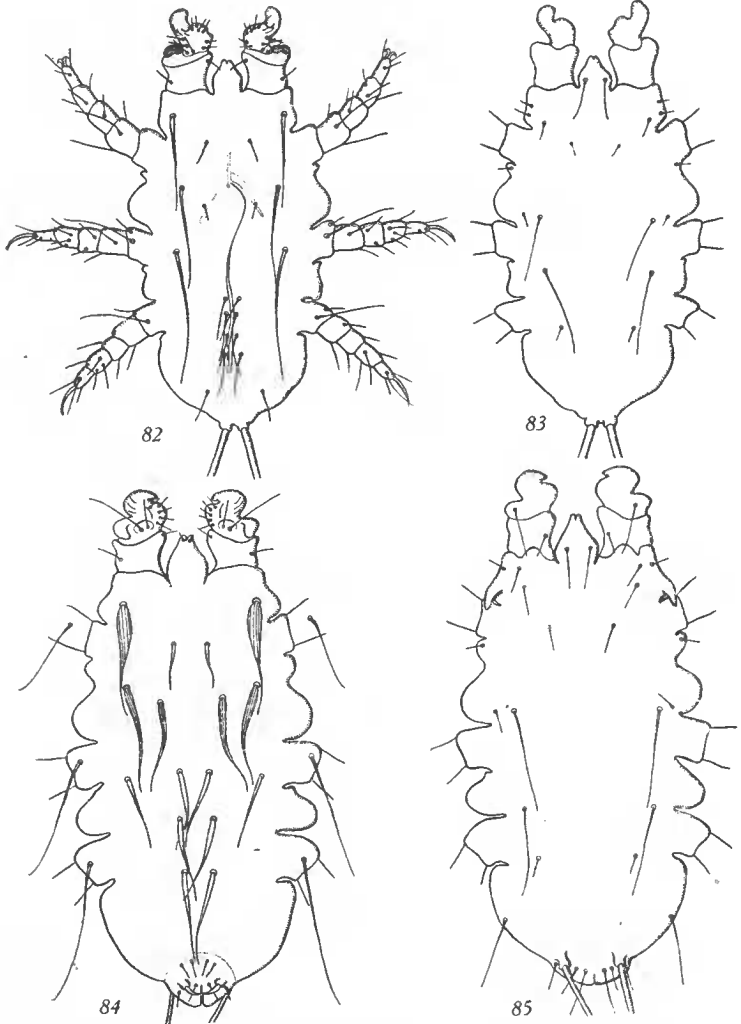
The male dorsum (fig. 82) has lateral spines I placed between coxae I and II, extending beyond bases of lateral spines II; lateral spines II posterior to coxae II, extending to anterior edge of coxae IV; lateral spines III level with coxae III, extending beyond coxae IV. Lateral spines I to III long, stout at base, tapering to long slender points. Sub-median spines I level with coxae II, short, simple; sub-median spines II posterior to lateral spines II, shorter than preceding spines; sub-median spines III level with anterior edge of coxae IV; sub-median spines IV level with middle of coxae IV; sub-median spines V level with posterior edge of coxae IV; sub-median spines VI placed further back, flanked by a pair of spines closer to posterior edge of body. Sub-median spines III to VI sub-equal, long, simple. Penis long, sinuous, extending from beyond sub-median spines VI to the genital pore.

The male venter (fig. 83) has three pairs of simple spines anterior to coxae II; level with coxae II is a pair of short spines; posterior to coxae II is a pair of spines on the lateral edge of body; anterior to coxae III is a pair of long, simple spines flanked by a pair of accessory spines; between coxae III and IV is a pair of long, simple spines; level with posterior edge of coxae IV is a pair of short spines. Tarsus II with a pair of short, stout claws; tarsus III and IV each with a single, long claw.

The female dorsum (fig. 84) has lateral spines I between coxae I and II, broadly foliate, striated longitudinally, tapering, extending to bases of lateral spines II; lateral spines II posterior to coxae II, expanded at base, not foliate, extending to posterior edge of coxae III, striated longitudinally; lateral spines III level with coxae III, stout, simple. Sub-median spines I level with coxae II, long, simple; sub-median spines II posterior to lateral spines II, stout at base, long, striated; sub-median spines III level with coxae III, long,

stout; sub-medial spines IV anterior to coxae IV; sub-medial spines V level with coxae IV, longer than preceding spines. Anterior to the genital claws are four slender spines; level with the genital claws are two pairs of spines.

The female venter (fig. 85) has three pairs of simple spines anterior



Radfordia ewingi (Fox, 1937).

FIG. 82, ♂ dorsum. — FIG. 83, ♂ venter. — FIG. 84, ♀, dorsum. — FIG. 85, ♀ venter.

to coxae II with a fourth pair of spines level with coxae II ; posterior to coxae II is a pair of spines on the lateral edge of body ; anterior to coxae III is a pair of very long, simple spines, flanked laterally by a pair of shorter spines ; a pair of long, simple spines level with the posterior edge of coxae IV. On the lateral edge of body, midway between coxae IV and terminal bristles, is a pair of long, stiff spines ; level with terminal bristles is a transverse row of six spines, the median pair being the longest. Tarsus II with two short, stout claws ; tarsus III and IV each with one long, stout claw.

Type host : Carolina jumping mouse (*Zapus hudsonicus americanus* Barton).

Type locality : Suitland, Maryland, U. S. A., July 31, 1937, Robert Bray.

Measurements : ♂ 0,36 mm. × 0,17 mm. ; ♀ 0,42 mm. × 0,23 mm.

Protonymph. 0,28 mm. × 0,16 mm. ; Deutonymph. 0,35 mm. × 0,21 mm.

Holotype female, allotype male, protonymph and deutonymph in U. S. National Museum, No. 1279. Paratypes in Fox's private collection.

RADFORDIA SUBULIGER Ewing, 1938.

Radfordia subuliger Ewing, 1938, *Proc. ent. Soc. Wash.*, **50** : 7, 187.

The female dorsum (fig. 86) has lateral spines I anterior to coxae II, extending to midway between coxae II and III, expanded at base, two-jointed, striated ; lateral spines II slightly expanded, two-jointed, striated, placed posterior to coxae II ; lateral spines III level with coxae III, expanded, two-jointed, striated. Sub-median spines I level with coxae II, stout, short ; sub-median spines II slightly below level of lateral spines II, broadly expanded, extending to middle of coxae III, striated ; sub-median spines III level with coxae III, narrower than preceding spines, striated ; sub-median spines IV anterior to coxae IV ; sub-median spines V level with coxae IV, similar to preceding spines. Anterior to genital pore are four small, simple spines ; a further group of four small spines close to the pore ; anterior to terminal bristles are two pairs of simple spines.

The female venter (fig. 87) has two pairs of spines anterior to coxae II ; level with coxae II is a pair of spines ; posterior to coxae II is a pair of spines medially and a pair laterally ; anterior to coxae III is a pair of long spines ; midway between coxae III and IV is a pair of very long spines ; level with coxae IV is a pair of spines. Between the terminal bristles are two pairs of spines,

one pair borne on the posterior edge of the body. Tarsus II with two claws; tarsus III and IV each with a single claw.

The male is unknown.

Type host : Small-eared harvest mouse (*Reithrodontomys humulis impiger* Bangs).

Type locality : College Park, Maryland, U. S. A.

Measurements : ♀ 0,45 mm. × 0,23 mm.

Holotype female in U. S. National Museum, Washington. No 1280.

RADFORDIA DAVISI (Radford, 1938).

Myobia davis Radford, 1938, *Parasitology*, **30** : 4, 433.

The arrangement of dorsal spines on the nymph are most unusual also their shape. Only the nymphal stage is known, the original description was based upon the holotype, but the species has since been recorded from the type host (*Rattus norvegicus norvegicus* Berkenhout) in Canada. Thanks to Dr. H. H. J. NESBITT, Science Service, Department of Agriculture, Ottawa, Canada I have had the opportunity to examine this specimen and confirm his identification.

On the nymphal dorsum there are two very small spines midway between coxae II and III; anterior to coxae III is a transverse row of six spines, shaped like a spear-head, the two outer pairs having a lateral projection on one side, the median pair being almost normally spear-like. Midway between coxae III and IV is another transverse row of six spines, sub-similar to the preceding, but shorter. Midway between coxae IV and the terminal bristles is a third row of six spines in which the two median pairs are normal and the lateral pair having a more pronounced projection on the outside. Between transverse row I and II is a pair of spines with only a slight lateral projection, and in line with the median pairs of spines of these three rows.

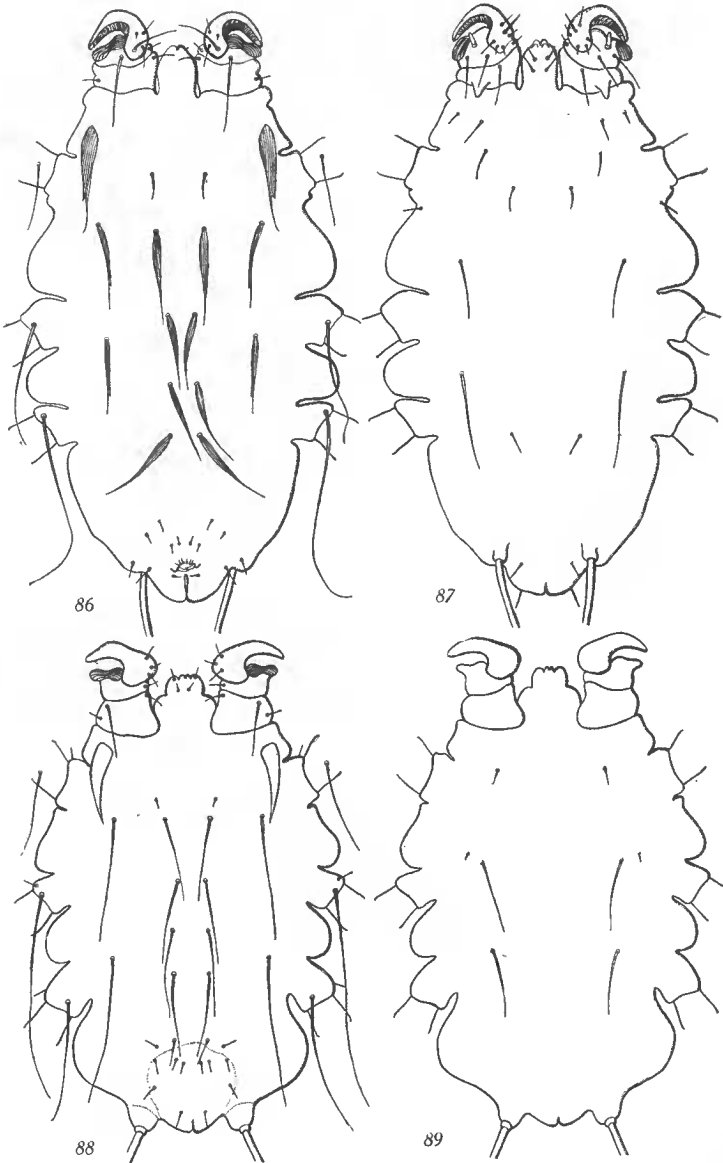
The chaetotaxy of the venter is simple. One pair of minute spines is placed level with anterior edge of coxae II; one pair midway between coxae II and III; one pair midway between coxae III and IV; a fourth pair level with coxae IV.

Type host : Brown rat (*Rattus norvegicus norvegicus* Berkenhout).

Type locality : Freetown, Sierre Leone. May 16, 1936. D. H. S. Davis.

Measurements : Nymph. 0,32 mm. × 0,25 mm.

Holotype nymph in the British Museum (Nat. Hist.). No. 1938-2-28-1.



Radfordia subuliger Ewing, 1938.
FIG. 86, ♀ dorsum. — FIG. 87, ♀ venter.
Radfordia floridensis Ewing, 1938.
FIG. 88, ♀ dorsum. — FIG. 89, ♀ venter.

RADFORDIA FLORIDENSIS Ewing, 1938.

Radfordia floridensis Ewing, 1938, *Proc. ent. Soc. Wash.*, **40**: 7, 187.

The female dorsum (fig. 88) has lateral spines I broadly expanded, tooth-like, placed anterior to coxae II, extending beyond base of lateral spines II; lateral spines II posterior to coxae II, long, spine-like, extending almost to coxae IV; lateral spines III level with anterior edge of coxae IV, extending beyond posterior edge of body. Sub-median spines I small, level with posterior edge of coxae II; sub-median spines II posterior to coxae II, long; sub-median spines III level with coxae III; sub-median spines IV midway between coxae III and IV; sub-median spines V level with coxae IV, long; sub-median spines II to V sub-similar. Anterior to genital pore is a line of four small spines. In the genital pore area are a number of spines but the camera lucida sketch does not depict these clearly.

The female venter (fig. 89) has one pair of spines level with coxae II; level with anterior edge of coxae III is a pair of long spines flanked laterally by a pair of smaller spines; level with anterior edge of coxae IV is a pair of long spines. Tarsus II with two claws; tarsus III and IV each with a single claw.

The male is unknown.

Type host: Free-tailed bat (*Tadarida cynocephala*).

Type locality: Leon County, Florida, U. S. A., August, 27, 1934.
E. V. Komarek.

Measurements: ♀ 0,43 mm. × 0,28 mm.

Holotype female in U. S. National Museum, No. 1281.